

WHAT WE CLAIM IS:

1. An AC operating electroluminescence device,
comprising:

5 a light-emitting layer containing phosphor
particles; and

an insulating layer containing an inorganic
dielectric substance,

wherein said electroluminescence device is capable of
10 causing electroluminescence,

wherein a total thickness of the light-emitting layer and
the insulating layer is less than 15 μm , and

wherein the electroluminescence device starts light
emission when an average field intensity applied between
15 electrodes in said electroluminescence device is 0.05
MV/cm or more.

2. The AC operating electroluminescence device
according to claim 1, wherein a total thickness of the
20 light-emitting layer containing the phosphor particles and
the insulating layer is 3 to 10 times as large as an
average particle diameter of the phosphor particles.

3. The AC operating electroluminescence device
25 according to claim 1, wherein an average particle diameter

of the phosphor particles is 0.1 μm to 5 μm .

4. The AC operating electroluminescence device
according to claim 2, wherein an average particle diameter
5 of the phosphor particles is 0.1 μm to 5 μm .

5. The AC operating electroluminescence device
according to claim 1, wherein a change in current
consumption increases along with an increase in luminance
10 occurs at a field intensity applied between the electrodes,
which field intensity is equal to or higher than the
average field intensity at which the light emission starts.

6. The AC operating electroluminescence device
15 according to claim 2, wherein a change in current
consumption increases along with an increase in luminance
occurs at a field intensity applied between the electrodes,
which field intensity is equal to or higher than the
average field intensity at which the light emission starts.

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7. The AC operating electroluminescence device
according to claim 3, wherein a change in current
consumption increases along with an increase in luminance
occurs at a field intensity applied between the electrodes,
25 which field intensity is equal to or higher than the

average field intensity at which the light emission starts.

8. The AC operating electroluminescence device according to claim 4, wherein a change in current
5 consumption increases along with an increase in luminance occurs at a field intensity applied between the electrodes, which field intensity is equal to or higher than the average field intensity at which the light emission starts.

10 9. The AC operating electroluminescence device according to claim 1, wherein the insulating layer containing the inorganic dielectric substance is provided so as not to cover an entire surface of the phosphor particles but to come into contact with a part of the
15 surface of the phosphor particles in an electric field direction.

10. The AC operating electroluminescence device according to claim 2, wherein the insulating layer
20 containing the inorganic dielectric substance is provided so as not to cover an entire surface of the phosphor particles but to come into contact with a part of the surface of the phosphor particles in an electric field direction.

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11. The AC operating electroluminescence device according to claim 3, wherein the insulating layer containing the inorganic dielectric substance is provided so as not to cover an entire surface of the phosphor
5 particles but to come into contact with a part of the surface of the phosphor particles in an electric field direction.

12. The AC operating electroluminescence device
10 according to claim 4, wherein the insulating layer containing the inorganic dielectric substance is provided so as not to cover an entire surface of the phosphor particles but to come into contact with a part of the surface of the phosphor particles in an electric field
15 direction.

13. The AC operating electroluminescence device according to claim 5, wherein the insulating layer containing the inorganic dielectric substance is provided
20 so as not to cover an entire surface of the phosphor particles but to come into contact with a part of the surface of the phosphor particles in an electric field direction.

25 14. The AC operating electroluminescence device

according to claim 1, wherein the light-emitting layer has a surface smoothness of $1/8$ or less of the average thickness of the light-emitting layer in terms of a center line average roughness.

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15. The AC operating electroluminescence device according to claim 2, wherein the light-emitting layer has a surface smoothness of $1/8$ or less of the average thickness of the light-emitting layer in terms of a center
10 line average roughness.

16. The AC operating electroluminescence device according to claim 3, wherein the light-emitting layer has a surface smoothness of $1/8$ or less of the average
15 thickness of the light-emitting layer in terms of a center line average roughness.

17. The AC operating electroluminescence device according to claim 4, wherein the light-emitting layer has
20 a surface smoothness of $1/8$ or less of the average thickness of the light-emitting layer in terms of a center line average roughness.